

991dcit1

1 UNITED STATES DISTRICT COURT  
 1 SOUTHERN DISTRICT OF NEW YORK

2 -----x

2 THE CITY OF NEW YORK, et al,

3

3 Plaintiffs,

4 -v-

04 CV 3417

5 EXXON MOBIL CORPORATION, et al,

6 Defendants.

6 -----x

7

New York, N.Y.

7

September 1, 2009

8

10:05 a.m.

8

9 Before:

9

10 HON. SHIRA A. SCHEINDLIN,

10

District Judge

11

12 APPEARANCES

12

13 MICHAEL A. CARDOZO

13 Corporation Counsel of the City of New York

14 Attorneys for City Plaintiffs

14 BY SUSAN E. AMRON

15

15 SHER LEFF LLP

16 BY: VICTOR M. SHER

16 JOSHUA STEIN

17

17 GREENBERG GLUSKER

18 Attorneys for Plaintiffs

18 BY: ROBERT S. CHAPMAN

19

19 MCDERMOTT, WILL & EMERY

20 Attorneys for Defendant Exxon Mobil

20 BY: PETER JOHN SACRIPANTI

21 JAMES PARDO

21 WILLIAM STACK

22 JENNIFER KALNINS TEMPLE

22 ANTHONY BONGIORNO

23

24

25

SOUTHERN DISTRICT REPORTERS, P.C.  
 (212) 805-0300

991rcit2

Mohr - direct

1 have carcinogenic effects.  
2 Q. With regard to that classification system, you reviewed  
3 documents as to whether or not MTBE has been classified?  
4 A. Yes, I have.  
5 Q. With respect to the EPA, has it formally classified MTBE in  
6 any of those categories?  
7 A. The U.S. EPA has not classified MTBE as a human carcinogen.  
8 Q. With respect to MTBE, the jury's heard testimony about  
9 levels of exposure. In your opinion to a reasonable degree of  
10 scientific and medical certainty, is there such a thing as a  
11 safe level of exposure to MTBE in drinking water?  
12 A. Yes, there is.  
13 Q. Can you tell the jury why.  
14 A. There is no human data that MTBE is a carcinogen, and there  
15 is very limited animal data. We don't really think it's much  
16 of a carcinogen, if at all. There are some noncarcinogenic  
17 effects --  
18 MR. CHAPMAN: Your Honor, is this the witness's  
19 testimony? If it is, it should be "I."  
20 THE COURT: Yes, I agree. I was worried about the  
21 "we." Let's rephrase that. Can you give your opinion?  
22 THE WITNESS: Yes.  
23 Q. With respect to your opinion --  
24 THE COURT: Hold on.  
25 MR. STACK: I apologize.

SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300

991rcit4

Mohr - direct

1 Q. With regard to the method that is being used, do you know  
2 where that method for dissolving gallstones was developed?

3 A. I believe it was developed by a Dr. Fischel. I'm not  
4 exactly sure -- Mayo Clinic. I could be wrong on that.

5 Q. With regard to this particular method, have you actually  
6 reviewed the literature regarding the procedure that is used to  
7 dissolve gallstones?

8 A. MTBE has received experimental approval from the Federal  
9 Drug Administration to use as a medication, as a medication to  
10 dissolve gallstones. In Connecticut they used this procedure  
11 for quite a while. They have used it in Europe for quite a  
12 while for people who could not tolerate surgery. I don't  
13 really mean the little laproscopic surgery that they do now.  
14 But in the old days, the old days being 20 years ago, when you  
15 had gallbladder surgery, sometimes they would make a big scar  
16 and you would be off work for six weeks or more.

17 For people who could not tolerate having gallbladder  
18 surgery, another way to get rid of the gallstones is to  
19 dissolve them. MTBE was used to dissolve gallstones. There  
20 are a couple of different methods. The most common is  
21 percutaneous infusion.

22 Q. What does that mean?

23 A. You take a needle with a little tube on it, you stick it  
24 in, into the gallbladder, and you run the MTBE through in small  
25 amounts over a period of a couple hours until the gallstones

SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300

991rcit4

Mohr - direct

- 1 A. I have an opinion that MTBE is not carcinogenic in humans.  
2 Q. With regard to the work that you have done, did you review  
3 the studies that were performed on animals using inhalation?  
4 A. Yes, I have.  
5 Q. Can you tell the jury what the inhalation studies that you  
6 reviewed showed.  
7 A. There are two animal inhalation studies looking at cancer  
8 as end points. One by Dr. Chung and also Dr. Berg used rats.  
9 The rats were exposed to levels of MTBE at zero -- that's the  
10 control group, they didn't get any MTBE -- at 400 parts per  
11 million, 3,000 parts per million, and 8,000 parts per million.  
12 In those rats that were exposed at 8,000 parts per million --  
13 you have to add three more zeros to get parts per billion. At  
14 the highest doses they found an increase -- well, at both doses  
15 they found an increase in nephropathy, in kidney disease. But  
16 they did find an increase in kidney tumors in male rats at the  
17 high doses.  
18 Q. With regard to the other study that was done by Burleigh  
19 Flayer, did you review that as well?  
20 A. Yes.  
21 Q. What did that show?  
22 A. The Burleigh Flayer study was done on mice instead of on  
23 rats. The mice were exposed to the exact same levels that the  
24 rats were exposed to. For 18 months they were exposed to zero,  
25 400, 3,000, or 8,000 parts per million. The mice showed an

SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300

3090

991rcit4

Mohr - direct

1 due to chance alone. But statistically significant in this  
2 case means they are 95 percent sure that there was an increase  
3 in the hepatocellular adenomas, noncancerous liver tumors, or  
4 cancerous liver tumors added together in female mice.  
5 Q. In your opinion, do the mice and rat studies using the  
6 inhalation mode demonstrate that MTBE is a potent carcinogen  
7 which may be carcinogenic to humans?  
8 A. No.  
9 Q. Why not?  
10 A. The levels that were given to the mice and rats, the  
11 highest levels are astronomical. They are a huge amount, far  
12 more than a human would be ever exposed to. Also, we know that  
13 there are some chemicals that are carcinogenic in animals that  
14 just aren't carcinogenic in humans. So when we see animal  
15 studies, you have to take that sort of in context of what the  
16 other data are showing.  
17 Q. In the course of your work on this matter, did you also  
18 review studies where animals were exposed to MTBE through  
19 ingestion?  
20 A. Yes, I have.  
21 Q. Were those rats or mice in the ingestion study.  
22 A. They were rats.  
23 Q. Who performed that work?  
24 A. The work was done in Italy. The first author on the paper  
25 is Balpoggi, or Belpoggi, I guess. They took Sprague Dawley

SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300

3091

991rcit4

Mohr - direct

1 rats and exposed them to either no MTBE, 250 milligrams per  
2 kilogram of MTBE, or 1,000 milligrams per kilogram of MTBE.  
3 They did it by nasal gavage. That means that the rats weren't  
4 about to eat that stuff, so they put a tube down in the rat's  
5 stomach and force-fed it to them in olive oil.  
6 Q. With regard to the Belpoggi study, have you as part of your  
7 professional work assessed that study and its findings?  
8 A. Yes, I have.  
9 Q. What did you find?  
10 A. It's a little hard to know exactly what to make of that  
11 paper. If you look at all tumors, clearly in the Belpoggi  
12 study the rats that got olive oil alone had lots more tumors  
13 than the rats that got MTBE. If you look at just noncancer  
14 tumors or cancer tumors. The rats that got the 250 milligrams  
15 per kilogram of MTBE had a few less tumors and the rats that  
16 got 1,000 milligrams per kilogram of MTBE had lots fewer  
17 tumors.  
18 THE COURT: Had what?  
19 THE WITNESS: Fewer tumors, lots fewer tumors.  
20 A. Well, that seems a little odd. But Belpoggi said that  
21 female rats had an increase when they added together leukemia  
22 and lymphoma, statistically significant increase in leukemia  
23 and lymphoma. So you look at the male rats. Leukemia and  
24 lymphoma clearly went down in the male rats. The people who  
25 got -- people -- the rats that got olive oil alone had the

SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300

3096

991rcit4

Mohr - direct

1 also look at government agencies and standard-setting agencies  
2 in the health area to see if they had ever determined that MTBE  
3 was classified as a human carcinogen?  
4 A. Yes, I have.  
5 Q. Did you look at the work that was done by the Agency for  
6 Research on Cancer associated with the World Health  
7 Organization, IARC?  
8 A. I have looked at the IARC document.  
9 Q. Tell the jury, has IARC classified MTBE as a human  
10 carcinogen?  
11 A. IARC says that MTBE is not a human carcinogen. They do not  
12 classify it as a probable human carcinogen.  
13 Q. Have you looked at any of the work that was done by the  
14 European Union in determining for European countries whether or  
15 not MTBE is a carcinogen?  
16 A. Yes. The European Union also has a group that looks into  
17 these kinds of things, and they issued a report. The European  
18 Union also says that MTBE is not a probable human carcinogen.  
19 Q. Can you tell the jury what the National Toxicology Program  
20 is.  
21 A. The National Toxicology Program is an interagency program  
22 within the U.S. federal government consisting of  
23 representatives from NIOSH, National Institute of Occupational  
24 Safety and Health, NIEHS, the National institute of  
25 Environmental Health Sciences, and the toxicology program

SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300

3097

991rcit4

Mohr - direct

1 located within the FDA, the Federal Drug Administration. Those  
2 three bodies come together and issued a report.  
3 Q. Did the National Toxicology Program in its report classify  
4 MTBE as a human carcinogen?  
5 A. The National Toxicology Program did not classify MTBE as a  
6 probable human carcinogen.  
7 Q. Is there any standard-setting agency that you've seen in  
8 the health field that's classified MTBE as a human carcinogen?  
9 A. No, not that I've seen.  
10 Q. With regard to your opinions in this case based on your  
11 research and review of the literature, have you formed an  
12 opinion to a reasonable degree of scientific or medical  
13 certainty regarding the carcinogenicity of MTBE in humans?  
14 A. Yes, I have.  
15 Q. What is your opinion?  
16 A. My opinion is that MTBE is not a human carcinogen.  
17 Q. In your field as a health professional, can you tell the  
18 jury what the phrase "weight of the evidence" means to you.  
19 A. "Weight of the evidence" means how much credibility you  
20 give to different kinds of evidence. When I teach my  
21 environmental epidemiology class, and we're talking about  
22 carcinogenesis, I teach them that mutagenic studies have almost  
23 little to no relevance in human disease. The next rung are  
24 animal studies. We give some credence to animal studies,  
25 although we know that there are some chemicals that cause

SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300

3103

991rcit4 Mohr - direct  
1 me.  
2 THE WITNESS: I've got it here.  
3 THE COURT: OK.  
4 THE WITNESS: "More recently, 25 genotoxic assays were  
5 reviewed, with the author finding the data indicative of  
6 genotoxicity are very weak, with none of the studies indicating  
7 significant activity having been independently verified except  
8 for the mutagenicity in mouse lymphoma cells."  
9 THE COURT: Thank you. The author of that is  
10 McGregor?  
11 THE WITNESS: Yes, it is.  
12 THE COURT: Do you know him, by the way?  
13 THE WITNESS: I do not. He is in England.  
14 BY MR. STACK:  
15 Q. In the course of your work, you reviewed the Toxicological  
16 Review for the establishment of State of New York's MCL, am I  
17 correct?  
18 A. Yes, I have.  
19 Q. If I could direct your attention to tab 6, page 29, table E  
20 as in echo. Do you have that table in front of you?  
21 A. Yes, I do.  
22 Q. Did the State of New York, in developing its MCL, also look  
23 at and report on the results of testing for genetic effects of  
24 MTBE?  
25 A. Yes, it did.

SOUTHERN DISTRICT REPORTERS, P.C.  
(212) 805-0300

3104

991rcit4 Mohr - direct  
1 Q. What did they report in their MCL support document?  
2 MR. CHAPMAN: Your Honor, the document speaks for  
3 itself.  
4 THE COURT: Yes, I know. He is asking this expert to  
5 summarize it. It may speak for itself, but the jury aren't  
6 scientists and neither am I. She is, and we'll hear her  
7 explain it.  
8 A. Similarly, the MCL document from the State of New York says  
9 the results of 21 of 25 tests to date are negative. That was  
10 regarding assays for mutagenicity.  
11 Q. With regard to the weight of the evidence here, what does  
12 the weight of the evidence show to you --  
13 THE COURT: It does say on the other hand 4 tests  
14 showed positive results, right?  
15 THE WITNESS: Yes, it does.  
16 THE COURT: Go ahead.  
17 Q. As an epidemiologist and a professional in this area, what  
18 does the weight of the evidence show concerning the testing  
19 results of the mutagenicity of MTBE?  
20 A. The results show that MTBE is at best a weak mutagen and  
21 may not be particularly mutagenic at all.  
22 Q. In the context of evaluating the carcinogenicity of MTBE,  
23 is it your opinion that the mutagenicity of a substance like  
24 MTBE is even a factor in humans?  
25 A. As I think I mentioned, in my environmental epi class,

SOUTHERN DISTRICT REPORTERS, P.C.  
(212) 805-0300

3106

991rcit4

Mohr - direct

1 Q. Can you tell the jury what the two studies were that you  
2 looked at in Chinese. You actually read these reports,  
3 correct?

4 A. I read these two studies. One is by Dr. Du and the other  
5 one is by Dr. Yeung, I think. Dr. Du is the fourth author I  
6 think on the Dr. Yeung study, so I assume that they did the  
7 work in collaboration.

8 Dr. Du reported from his laboratory in China that he  
9 had discovered an MTBE DNA adduct. They had looked under it  
10 under mass spectroscopy and in the Yeung paper they had done  
11 the same thing with a different type of mass spectroscopy.

12 MR. CHAPMAN: Your Honor, once again, this is beyond  
13 the scope. If your Honor looks at page 18, all it says --

14 THE COURT: Right, I'm going back to it.

15 MR. CHAPMAN: All that says is she is reporting what  
16 other people said but not coming to an opinion. Just for her  
17 to parrot what other people say is not going to --

18 THE COURT: You are digging a hole here for yourself.  
19 I allowed your expert to do precisely that. I'm sure if you  
20 read the transcript you will recall that I let her summarize  
21 many other studies, and she said that was the basis for her  
22 opinion.

23 MR. CHAPMAN: That is an appropriate testimony. But  
24 that's not what was done in her expert report.

25 THE COURT: It is. She is criticizing Dr. Burns's  
SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300

3107

991rcit4

Mohr - direct

1 study. She said Dr. Burns relies upon Du, the person she is  
2 talking about, citing that MTBE causes DNA adducts. Then she  
3 says why this study has been criticized. She doesn't have to  
4 come out and say, therefore I criticize Dr. Burns's report.  
5 That's what the opinion is. That's obviously the opinion. She  
6 is explaining why she criticizes it, that's all. She can't  
7 reach her own opinion that she didn't tell you about with  
8 respect to mutagenicity, but she can tell you why she  
9 criticizes Dr. Burns's approach. It's right there.

10 MR. CHAPMAN: Thank you, your Honor.

11 THE COURT: If you would phrase it that way, I'd  
12 appreciate it, Mr. Stack.

13 Q. In the course of your work on this matter, did you  
14 critically analyze some of the findings of Dr. Burns relative  
15 to her reliance on the Du study?

16 A. Yes, I did.

17 Q. What did you do? No pun intended.

18 A. I had read and reread the papers by Dr. Du, and I think  
19 that was the first time that I read the one by Dr. Yeung. They  
20 find that MTBE may cause an MTBE adduct. DNA adducts are sort  
21 of an old-hat idea that we have had in medicine that you don't  
22 have to wait for disease. You can find these markers of  
23 disease, predisease if you will, and those are the people that  
24 you would spend time screening. It just hasn't panned out.

25 I think that Dr. Burns said in her testimony that  
SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300



991rcit4

Mohr - direct

1 there have been hundreds of reports with DNA adducts. So on  
2 Sunday I went to the --

3 THE COURT: You mean this past Sunday?

4 THE WITNESS: This past Sunday.

5 THE COURT: I can't allow that.

6 A. All right. I have never seen a single study that shows  
7 that DNA adducts are a marker for disease. There are several  
8 studies out there looking at DNA adducts, and they do not  
9 correlate with disease, which is why for the most part we don't  
10 spend much time doing them in medicine anymore. Everything is  
11 genomics and snips. I guess now the big thing is single  
12 nucleotide polymorphism. We are always trying to find what  
13 causes cancer, why does one person get cancer and the other  
14 person doesn't, what makes them different. We thought maybe it  
15 was DNA adducts, but they just plain haven't panned out.

16 Q. With regard to DNA adducts and damage to cells in the human  
17 body, as a medical doctor, based on your training, tell the  
18 jury, what does the human body do with damaged cells.

19 A. If you have damage to your DNA from any cause, any cause at  
20 all, if the cell dies, nothing happens. Cells die all the  
21 time. I lose skin cells and hair cells and all kinds of cells  
22 all the time. So if damage happens to a cell that's going to  
23 die, nothing happens.

24 If damage happens to a cell that doesn't divide,  
25 nothing happens. You increase brain cells until you're about

SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300

3113

91dcit5

Mohr - cross

1 Q. Now, you prepared an expert report in this case, correct?  
2 A. Yes.  
3 Q. Now, in your expert report -- it is in the notebook -- you  
4 said -- it is on page 5 of the report. You say there "MTBE has  
5 received FDA approval for use as a human medication to dissolve  
6 gallstones." Do you see that?  
7 A. Yes, I do.  
8 Q. And then on page 8 of your report, you summarize. You say,  
9 "MTBE has received FDA approval for use as a human medication  
10 to dissolve gallstones."  
11 Now, those statements really aren't accurate, are  
12 they?  
13 A. In what way?  
14 Q. The FDA did not approve MTBE for use as a human medication  
15 to dissolve gallstones, did it?  
16 A. The FDA gave approval for experimental use of MTBE, but  
17 it's not patentable so nobody would ever do all the studies to  
18 get full approval.  
19 Q. And you said there in your report that the FDA gave  
20 approval. So let's see what the FDA says about it.  
21 Can we go to the next one, please.  
22 Now, here in the Federal Register, which is Tab 1, and  
23 it's page 41 of 426, it says: "The Food and Drug  
24 Administration has classified MTBE as an investigational new  
25 drug." Do you see that?

SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300

3114

91dcit5

Mohr - cross

1 A. Yes, I do.  
2 Q. In the Federal Register.  
3 And now let's go to see what the Federal Register says  
4 about that.  
5 Can we have the next one, please?  
6 MR. STACK: Your Honor, this is not from the Federal  
7 Register.  
8 MR. CHAPMAN: No. Did I say that? It is from the  
9 FDA.  
10 MR. STACK: I object. This is not from any federal  
11 document.  
12 MR. CHAPMAN: It is from the FDA Web site, your Honor,  
13 and therefore it comes in as a government document.  
14 THE COURT: He is representing, he is calling it the  
15 FDA's Web site. Mr. Stack, do you want --  
16 MR. STACK: Your Honor, it does indicate it has an  
17 FDA.gov and it is a consumer information statement. So I  
18 withdraw that.  
19 THE COURT: It is OK.  
20 MR. STACK: It is just not from the Federal Register.  
21 It is OK.  
22 THE COURT: Thank you. I appreciate that.  
23 BY MR. CHAPMAN:  
24 Q. Here is what the FDA says: "Investigational or  
25 experimental drugs are new drugs that have not yet been

SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300

91dcit5

Mohr - cross

- 1 approved by the FDA." Do you see that, Dr. Mohr?
- 2 A. Yes.
- 3 Q. Now, you are the medical director for an insurance company?
- 4 A. Yes, I am.
- 5 Q. Are you aware that Aetna Insurance Company does not cover
- 6 treatment for gallstones because MTBE is not FDA approved? Are
- 7 you aware of that?
- 8 A. You said as a medical director at New York Life?
- 9 Q. Yes.
- 10 A. No, I am not aware that Aetna doesn't pay for gallstones
- 11 with MTBE, but I think I did say that it had received
- 12 experimental approval --
- 13 Q. Yes.
- 14 A. -- here in court.
- 15 Q. Right. But what you said in your report is that it had
- 16 received FDA approval, and that's not true?
- 17 A. I should have said experimental, like I did here in court.
- 18 I apologize.
- 19 Q. You said it twice in your report that it was FDA approved,
- 20 right?
- 21 A. Well, twice but it is cut and pasted. It is the same
- 22 thing.
- 23 Q. It is a different type. Do you want to see it again?
- 24 A. Of course it is a different type. All of the things on the
- 25 conclusion page are cut and pasted from the text. So it's

SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300

3125

9ldcit5 Mohr - cross

1 says; do you see that?  
2 A. All right.  
3 Q. Let's go to the next page.  
4 And this study included people from the National  
5 Institute of Environmental Health Sciences. Do you know what  
6 that is?  
7 A. Yes, I do.  
8 Q. What is it?  
9 A. If you've heard of the National Institutes of Health, there  
10 are lots of different National Institutes of Health, like there  
11 is a Cancer Institutes of Health, and NIEHS, the National  
12 Institute for Environmental Health Sciences, is one of those  
13 institutes.  
14 Q. And you testified that you knew what the Centers for  
15 Disease Control and Prevention is, right?  
16 A. Yes, I do.  
17 Q. That is a national public health organization?  
18 A. Yes, it is.  
19 Q. And you know what the United States Environmental  
20 Protection Agency is?  
21 A. Yes.  
22 Q. Let's go to the next page.  
23 And here is what representatives of all of those  
24 organizations had to say. They say there "We believe the  
25 weight of evidence supports regarding MTBE as having a

SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300

3126

9ldcit5 Mohr - cross

1 carcinogenic hazard potential for humans."  
2 Do you see that?  
3 A. Yes, I do.  
4 Q. And you disagree with that?  
5 A. In 1997 I might have agreed with that; but now that I know  
6 about the problems with the Belpoggi study and the Belpoggi  
7 labs, I do not agree with that.  
8 Q. So because you think there are problems with one of those  
9 three studies, you have changed your opinion?  
10 A. Yes, I have.  
11 Q. OK. And so if there were just two inhalation studies that  
12 came out the way they did, that would be not enough evidence to  
13 reach the conclusion that's in yellow; you needed three, is  
14 that right?  
15 A. Well, because the tumors in male rats occur with any kind  
16 of branch chain hydrocarbon, including those that we know are  
17 noncarcinogenic, it's hard to put too much faith in that  
18 particular tumor. And because the hepatocellular adenomas are  
19 noncarcinogenic, yeah, I think that you needed a little bit  
20 more weight of evidence. And the weight of evidence in '97 --  
21 Mary White came to this conclusion. I know her. We are  
22 friends. I respect her. In '97 she might have been able to  
23 get me to agree with that statement, but now that we know, we  
24 have more information, I do not.  
25 Q. And how many more of these cancer studies has the petroleum

SOUTHERN DISTRICT REPORTERS, P.C.

(212) 805-0300